

IN THE CLAIMS:

Please amend the claims as follows:

Claim 1. (Currently Amended).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, ~~comprising~~ consisting of the steps of

firstly treating the semiconductor wafers in a bath with an aqueous HF solution ~~only~~ containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O₃ solution ~~only~~ containing O₃ and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution ~~only~~ containing HCl and optionally O₃;

whereby these treatment steps form a treatment sequence B₂, which avoids rinsing with water or another treatment liquid and the addition of fresh water or other liquids to the treatment baths.

Claim 2. (Previously Presented).

The process as claimed in claim 1,
wherein the treatment sequence B₂ is preceded by a treatment
B₁ of the semiconductor wafers with an aqueous SC-1 solution.

⁴
Claim ~~3~~. (Original).

The process as claimed in claim 1,
wherein the treatment sequence B₂ is followed by a treatment
B₃ comprising drying the semiconductor wafers.

⁵
Claim ~~4~~. (Original).

The process as claimed in claim ⁴~~3~~,
wherein the treatment of the semiconductor wafers is
sequenced according to the term $m * (B_1 + B_2) + B_3$,
m being an integer number and the treatment B₁ and the
treatment sequence B₂ being carried out in succession, and
this taking place m times, before the drying treatment B₃ is
performed.

⁷
Claim ~~5~~. (Original).

The process as claimed claim 1,
wherein in treatment sequence B₂, the aqueous HF solution
contains HF in a concentration of from 0.001% to 2% by weight and

optionally HCl in a concentration of up to 2% by weight and optionally a surfactant; and

wherein all percents by weight are based upon the total solution weight.

⁸
Claim ~~6~~. (Original).

The process as claimed in claim 1,

wherein in treatment sequence B₂, the aqueous O₃ solution contains O₃ in a concentration of from 1 ppm to 30 ppm and is optionally exposed to megasonic waves.

⁹
Claim ~~7~~. (Original).

The process as claimed in claim 1,

wherein the treatment liquid used last in the treatment sequence B₂ contains ozone and is optionally exposed to megasonic waves.

⁶
Claim ~~8~~. (Original).

The process as claimed in claim 3,

wherein the drying treatment is carried out using a step selected from the group consisting of centrifuging, using hot water, using isopropanol, and using marangoni principle.

Claim ³~~9~~ (Previously Presented).

The process as claimed in claim 2,

wherein in treatment B₁ the aqueous SC-1 solution contains a liquid selected from the group consisting of NH₄OH and H₂O₂, and TMAH (= tetramethylammonium hydroxide) and H₂O₂.

Claim 10 (Cancelled).

Claim ¹⁰~~11~~ (Currently Amended).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, ~~comprising~~ consisting of the steps of

firstly treating the semiconductor wafers in a bath with an aqueous HF solution ~~only~~ containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O₃ solution ~~only~~ containing O₃ and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution ~~only~~ containing HCl and optionally O₃ with exposure to megasonic waves,

whereby these treatment steps form a treatment sequence B₂, which avoids rinsing with water or another treatment liquid and the addition of fresh water or other liquids to the treatment

baths.

Please add new claims 12 to 15 as follow:

Claim ¹¹~~12~~. (New).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising the steps of firstly treating the semiconductor wafers in a bath with an aqueous HF solution containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O₃ solution containing O₃ and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution containing HCl and optionally O₃;

whereby these treatment steps form a treatment sequence B₂; and

circulating the treatment liquids of said baths by taking a part from each of said baths, filtering and returning the part to the corresponding treatment bath.

Claim ¹²~~13~~. (New).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising the steps of firstly treating the semiconductor wafers in a bath with an aqueous HF solution containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O₃ solution containing O₃ and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution containing HCl and optionally O₃ with exposure to megasonic waves;

whereby these treatment steps form a treatment sequence B₂; and

circulating the treatment liquids of said baths by taking a part from each of said baths, filtering and returning the part to the corresponding treatment bath.

¹³
Claim 14. (New).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising the steps of firstly treating the semiconductor wafers in a bath with an aqueous HF solution containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an

aqueous O_3 solution containing O_3 and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution containing HCl and optionally O_3 ; and

circulating the treatment liquids of said baths by taking a part from each of said baths, filtering and returning the part to the corresponding treatment bath;

whereby these treatment steps form a treatment sequence B_2 , which avoids rinsing with water or another treatment liquid and the addition of fresh water or other liquids to the treatment baths.

¹⁴
Claim 15. (New).

A process for the wet chemical treatment of semiconductor wafers with treatment liquids in baths, comprising the steps of

firstly treating the semiconductor wafers in a bath with an aqueous HF solution containing HF and optionally HCl and optionally a surfactant;

then treating the semiconductor wafers in a bath with an aqueous O_3 solution containing O_3 and optionally HF; and

then treating the semiconductor wafers in a bath with an aqueous HCl solution containing HCl and optionally O_3 with exposure to megasonic waves; and

circulating the treatment liquids of said baths by taking a

- part from each of said baths, filtering and returning the part to the corresponding treatment bath;

whereby these treatment steps form a treatment sequence B_2 , which avoids rinsing with water or another treatment liquid and the addition of fresh water or other liquids to the treatment baths.